

APPENDIX II
CLEAN VERSION OF THE ENTIRE SET OF PENDING CLAIMS
PURSUANT TO 37 CFR § 1.121 (c)(3)

1. A method for screening compounds that are agonistic or antagonistic to the melvalonate pathway in sterol synthesis, comprising:
 - a) providing: i) a test compound, ii) a growth media formulated to allow scoring of nonsense suppression in yeast, and iii) modified yeast cells derived from wild type yeast cells, wherein said modified yeast cells express reduced cytosolic levels of Mod5p, wherein the "p" in "Mod5p" refers to a polypeptide, as compared to said wild type yeast cells, and wherein said modified yeast cells comprise a gene with a nonsense mutation and a suppressor tRNA gene coding for a tRNA modified with isopentenyl adenosine by Mod5p;
 - b) mixing said growth media and said modified yeast cells to form an untreated modified yeast cell mixture;
 - c) adding an aliquot of said untreated modified yeast cell mixture to said test compound thereby creating a treated modified yeast cell mixture; and
 - d) measuring the growth of said modified yeast cells in said treated modified yeast cell mixture.
2. The method of Claim 1, wherein said measuring of step d) comprises examining the color of said modified yeast cells within said treated modified yeast cell mixture.
3. The method of Claim 1, wherein said measuring of step d) comprises comparing the growth and color of the modified yeast cells within said treated modified yeast cell mixture with the growth and color of the modified yeast cells within said untreated yeast cell mixture.
4. A method for screening compounds that are agonistic or antagonistic to the melvalonate pathway in sterol synthesis, comprising:
 - a) providing: i) a test compound, ii) a growth media lacking adenine, and iii) modified yeast cells derived from wild type yeast cells, wherein said modified yeast cells express reduced cytosolic levels of Mod5p as compared to said wild type yeast

cells, and wherein said modified yeast cells comprise an *ADE2* gene having a nonsense mutation and a gene coding for a nonsense suppressor tRNA;

- b) mixing said growth media and said modified yeast cells to form an untreated modified yeast cell mixture;
- c) adding an aliquot of said untreated modified yeast cell mixture to said test compound thereby creating a treated modified yeast cell mixture; and
- d) measuring the growth of said modified yeast cells in said treated modified yeast cell mixture.

5. The method of Claim 4, wherein said measuring of step d) comprises examining the color of said modified yeast cells within said treated modified yeast cell mixture.

6. The method of Claim 4, wherein said measuring of step d) comprises comparing the growth and color of the modified yeast cells within said treated modified yeast cell mixture with the growth and color of the modified yeast cells within said untreated yeast cell mixture.

7. A method for screening compounds that are agonistic or antagonistic to the melvalonate pathway in sterol synthesis, comprising:

a) providing: i) a test compound, ii) a growth media lacking adenine, and iii) modified yeast cells derived from wild type yeast cells, wherein said modified yeast cells express reduced cytosolic levels of Mod5p as compared to said wild type yeast cells, and wherein said modified yeast cells comprise an *ADE2* gene having a nonsense mutation and a *SUP7* gene coding for a tRNA;

- b) mixing said growth media and said modified yeast cells to form an untreated modified yeast cell mixture;
- c) adding an aliquot of said untreated modified yeast cell mixture to said test compound thereby creating a treated modified yeast cell mixture; and
- d) measuring the growth of said modified yeast cells in said treated modified yeast cell mixture.

8. The method of Claim 7, wherein said measuring of step d) comprises examining the color of said modified yeast cells within said treated modified yeast cell mixture.
9. The method of Claim 7, wherein said measuring of step d) comprises comparing the growth and color of the modified yeast cells within said treated modified yeast cell mixture with the growth and color of the modified yeast cells within said untreated yeast cell mixture.
10. A method for screening compounds that are agonistic or antagonistic to the melvalonate pathway in sterol synthesis, comprising:
 - a) providing: i) a test compound, ii) a growth media lacking arginine and containing a canavanine salt, and iii) modified yeast cells derived from wild type yeast cells, wherein said modified yeast cells express reduced cytosolic levels of Mod5p as compared to said wild type yeast cells, and wherein said modified yeast cells comprise a *CAN1* gene having a nonsense mutation and a gene coding for a nonsense suppressor tRNA;
 - b) mixing said growth media and said modified yeast cells to form an untreated modified yeast cell mixture;
 - c) adding an aliquot of said untreated modified yeast cell mixture to said test compound thereby creating a treated modified yeast cell mixture; and
 - d) measuring the growth of said modified yeast cells in said treated modified yeast cell mixture.
11. The method of Claim 10, wherein said measuring of step d) comprises comparing the growth and color of the modified yeast cells within said treated modified yeast cell mixture with the growth and color of the modified yeast cells within said untreated yeast cell mixture.
12. A method for screening compounds that are agonistic or antagonistic to the melvalonate pathway in sterol synthesis, comprising:
 - a) providing: i) a test compound, ii) a growth media lacking arginine and containing a canavanine salt, and iii) modified yeast cells derived from wild type yeast cells, wherein said modified yeast cells express reduced cytosolic levels of Mod5p as

compared to said wild type yeast cells, and wherein said modified yeast cells comprise a *CAN1* gene having a nonsense mutation and a *SUP7* gene coding for a tRNA;

- b) mixing said growth media and said modified yeast cells to form an untreated modified yeast cell mixture;
- c) adding an aliquot of said untreated modified yeast cell mixture to said test compound thereby creating a treated modified yeast cell mixture; and
- d) measuring the growth of said modified yeast cells in said treated modified yeast cell mixture.

13. The method of Claim 12, wherein said measuring of step d) comprises comparing the growth and color of the modified yeast cells within said treated modified yeast cell mixture with the growth and color of the modified yeast cells within said untreated yeast cell mixture.

14. A method for screening compounds that are agonistic or antagonistic to the melvalonate pathway in sterol synthesis, comprising:

- a) providing: i) a test compound, ii) a growth media lacking lysine, and iii) modified yeast cells derived from wild type yeast cells, wherein said modified yeast cells express reduced cytosolic levels of Mod5p as compared to said wild type yeast cells, and wherein said modified yeast cells comprise a *LYS2* gene having a nonsense mutation and a gene coding for a nonsense suppressor tRNA;
- b) mixing said growth media and said modified yeast cells to form an untreated modified yeast cell mixture;
- c) adding an aliquot of said untreated modified yeast cell mixture to said test compound thereby creating a treated modified yeast cell mixture; and
- d) measuring the growth of said modified yeast cells in said treated modified yeast cell mixture.

15. The method of Claim 14, wherein said measuring of step d) comprises comparing the growth and color of the modified yeast cells within said treated modified yeast cell mixture with the growth and color of the modified yeast cells within said untreated yeast cell mixture.

16. The method of Claim 14, wherein said gene coding for said nonsense suppressor tRNA is selected from the group consisting of *SUP7* and *SUP11*.
17. A method for screening compounds that are agonistic or antagonistic to the melvalonate pathway in sterol synthesis, comprising:
- a) providing: i) a test compound, ii) a growth media formulated to allow scoring of nonsense suppression in yeast, and iii) modified yeast cells derived from wild type yeast cells, wherein said modified yeast cells express reduced cytosolic levels of Mod5p or its homolog as compared to said wild type yeast cells, and wherein said modified yeast cells comprise a gene with a nonsense mutation and a suppressor tRNA gene coding for a tRNA modified with isopentenyl adenosine by Mod5p or its homolog;
 - b) mixing said growth media and said modified yeast cells to form an untreated modified yeast cell mixture;
 - c) adding an aliquot of said untreated modified yeast cell mixture to said test compound thereby creating a treated modified yeast cell mixture; and
 - d) measuring the growth of said modified yeast cells in said treated modified yeast cell mixture.
18. The method of Claim 17, wherein said measuring of step d) comprises examining the color of said modified yeast cells within said treated modified yeast cell mixture.
19. The method of Claim 17, wherein said measuring of step d) comprises comparing the growth and color of the modified yeast cells within said treated modified yeast cell mixture with the growth and color of the modified yeast cells within said untreated yeast cell mixture.
20. A method for screening for overexpressed genes, comprising:
- a) providing: i) an overexpressed gene wherein said overexpression alters the flux in the melvalonate pathway in sterol synthesis, ii) a growth media formulated to allow scoring of nonsense suppression in yeast, and iii) modified yeast cells derived from wild type yeast cells, wherein said modified yeast cells express reduced cytosolic levels

of Mod5p as compared to said wild type yeast cells, and wherein said modified yeast cells comprise a gene with a nonsense mutation and a suppressor tRNA gene coding for a tRNA modified with isopentenyl adenosine by Mod5p;

- b) mixing said growth media and said modified yeast cells to form an untreated modified yeast cell mixture;
- c) adding an aliquot of said untreated modified yeast cell mixture with said overexpressed gene thereby creating an overexpressed gene treated mixture of modified yeast cells; and
- d) measuring the growth of said overexpressed gene treated mixture of modified yeast cells.

21. The method, as claimed in claim 20, wherein said overexpressed gene is a yeast gene.